

Curriculum vitae of Roberto Giambò

Personal data and position

Born: March 11th, 1972

Internet: <http://tinyurl.com/giambo>

Full Professor of Mathematical Analysis at the Mathematics Division of the School of Science and Technology, University of Camerino (Unicam), since November 2016

Study and past positions

- **Associate Professor** of Mathematical Analysis at Unicam, School of Science and Technology, Mathematics Division, from November 2006 to October 2016.
- **Assistant Professor** in Mathematical Analysis at the Department of Mathematics and Computer Science of Unicam, from September 2002 to October 2006.
- **Postdoctoral position** at the Department of Mathematics and Computer Science of Unicam, from December 2000 to September 2002;
- **Ph.D in Mathematics** at Florence University, from November 1995 to November 2000;
- **Graduate study position** of the Italian National Research Council (CNR), from July to November 1995;
- **M.Sc. in Mathematics** at Camerino University on June 15, 1995, *cum laude*.

Memberships

- American Mathematical Society, regular member
- Unione Matematica Italiana, regular member
- Società italiana di relatività generale e fisica della gravitazione (SIGRAV), life member
- LiMiX (Unicam spin-off in technological research), founding partner

Scientific activities

- **Scientific coordinator** of a joint research project Unicam–Belumbury spa (total founding: 150 K €, from June to December 2015)
- **Member of the Scientific Committee**, VII International Meeting on Lorentzian Geometry (Sao Paulo, Brazil, July 22–26 2013)
- **Scientific coordinator**, project concerning the production of a groundbreaking electric car, in collaboration with Univeristy of Bologna, Belumbury spa and Picchio spa (total founding 4M €, from December 2011 to December 2012);
- **Session organizer**, *Dynamics and Thermodynamics of Blackholes and Naked Singularities* workshop (Milan, May 12–15, 2004);

- **Reviewer** for *AMS Mathematical Reviews*, since 2002;
- **Referee** for many international scientific journals in the fields of Mathematical Analysis and General Relativity.

Research activity

I authored and co-authored more than 60 papers on peer reviewed international journals, edited one volume, and have been many times speaker at national and international conferences in the fields of Nonlinear Analysis and General Relativity.

My research activity covers in particular variational methods with optimal controls and geodesics on differentiable manifolds, for instance multiplicity results for orthogonal geodesic chords and applications to brake orbits and homoclinics, and relativistic gravitational lenses between non-conjugate source and observer. Research expertise in General Relativity also includes gravitational collapse and spacetime singularities, with respect to Penrose's Cosmic Censorship Conjecture, and black holes sources as exact solutions of Einstein Field Equations in matter. Recent research activity also covers fault diagnosis techniques problems, and mathematical modeling applied to crash problems.

Some recent publications

1. R.G., F. Giannoni, P. Piccione, *Functions on the sphere with critical points in pairs and orthogonal geodesic chords*, **Journal of Differential Equations**, **260** (2016) 8261
2. M. L. Corradini, R. G., S. Pettinari, *On the adoption of a fractional-order sliding surface for the robust control of integer-order LTI plants*, **Automatica**, **51** (2015) 364.
3. R. G., F. Giannoni, P. Piccione, *Multiple brake orbits in m -dimensional disks*, **Calculus of Variations and Partial Differential Equations**, **54** (2015) 2553.
4. R. G., J. Miritzis, K. Tzanni, *Negative potentials and collapsing universes*, **Classical and Quantum Gravity** **32** (2015) 035009.
5. S. Boria, S. Maccagnani, R. G., F. Giannoni, *Crashworthiness and lightweight design of an innovative microcar*, **International Journal of Automotive Composites** **1** (2014) 313
6. R. G., G. Magli, *Qualitative analysis of collapsing isotropic fluid spacetimes*, **Classical and Quantum Gravity**, **31** (2014) 035016
7. R. G., F. Giannoni, P. Piccione, *Examples with minimal number of brake orbits and homoclinics in annular potential regions*, **Journal of Differential Equations** **256** (2014) 2677–2690
8. F. Cipolletta, R. G., *Collapse of spherical charged anisotropic fluid spacetimes*, **Classical and Quantum Gravity**, **29** (2012) 245008
9. R. G., F. Giannoni and P. Piccione, *Multiple Brake Orbits and Homoclinics in Riemannian Manifolds*, **Archive for Rational Mechanics and Analysis**, **200** (2011) 691
10. R. Bettiol, R. G., *Genericity of nondegenerate geodesics with general boundary conditions*, **Topological Methods in Nonlinear Analysis**, **35(2)** 339-365 (2010)
11. R. G., M. A. Javaloyes, *Genericity of nondegeneracy for light rays in stationary spacetimes (addendum)*, **Communications in Mathematical Physics**, **295** 289 (2010)

Public profiles

LinkedIn <https://it.linkedin.com/in/roberto-giamb%C3%B2-27b7711>

ORCID <http://orcid.org/0000-0002-7147-134X>

ResearchGate https://www.researchgate.net/profile/Roberto_Giambo2

Scopus <http://www.scopus.com/authid/detail.url?authorId=6701416853>

Google Scholar <https://scholar.google.it/citations?user=eQYKzYkAAAAJ>

Teaching activity

My first teaching activities date back to 1999. Since 2002 I regularly teach courses in Mathematical Analysis (Calculus I and II), for Mathematics and Physics students. I also teach and/or have taught courses in System Theory and General Relativity. I have been advisor for several M.Sc and B.Sc theses and supervisor of two Ph.D students (at the moment co-supervisor for other two students).

I have also taught Mathematics courses for Education Science students of the University of Macerata, from 2010 to 2015, and have been advisor for several theses there too.

Other organizing activities

- **Responsible of the Unicam BSc program in Mathematics and Applications** of Unicam, since July 2016
- **Ph.D Coordinator of the Mathematics program** at the International School of Advanced Studies of Unicam, since 2014.
- **Research quality assurance team member** for Unicam School of Science and Technology, since 2014.
- **Unicam responsible for web content management and communication**, from 2004 to 2011
- **Organizer board member** of Camerino University Science Faculty lectures *Immagini della Scienza e della Tecnologia*, from 2002 to 2004
- **Content management team member** for Camerino University Science Faculty website, from 2003 to 2004